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" Salvation of India lies in Cottages."

—*MAHATMA GANDHI*

CONTROVERSY OVER CO-OPERATIVE JOINT FARMING

THE Nagpur Congress resolution on Agrarian Organisational Pattern and Co-operative Joint Farming has been a subject of heated controversy both in the Lok Sabha and outside, the relevent portion of which reads as follows :—

"(1) The organisation of the village should be based on village panchayats and village co-operatives, both of which should have adequate powers and resources to discharge the functions allotted to them. A number of village co-operatives may form themselves into a union. All permanent residents of the village, whether owning land or not, should be eligible for membership of the village co-operative, which should promote the welfare of its members by introducing progressive farming methods and improved techniques of cultivation, and encouraging cottage industries. In addition to providing credit and discharging other servicing functions, it will arrange for pooling and marketing the agricultural produce of the farmers and for storage and godown facilities for them. Both the panchayat and the co-operative should be the spearheads of all developmental activities in the village and, more especially, should encourage intensive farming with a view to raising the per acre yield of agricultural produce.

"(2) The future agrarian pattern should be that of co-operative joint farming, in which the land will be pooled for joint cultivation, the farmers continuing to retain their property rights and getting a share from the net produce in proportion to their land. Further, those who actually work on the land, whether they own the land or not, will get a share in proportion to the work put in by them on the joint farm.

"As a first step, prior to the institution of joint farming, service co-operatives should be organised throughout the country. This stage should be completed within a period of three years. Even within this period, however, wherever possible and when generally agreed to by the farmers, joint cultivation may be started.

"(3) In order to remove uncertainty regarding land reforms and to give stability to the farmer, ceilings should be fixed on existing and future holdings and legislation to this effect, as well as for the abolition of intermediaries, should be completed in all States by the end of 1959. This does not mean any ceiling on income, as it is expected that, by intensive cultivation as well as by additional occupations, rural incomes will rise. Such surplus land should vest in the panchayats and should be managed through village co-operatives.

"(4) With a view to assuring a fair return to the tiller, a minimum of floor price should be fixed reasonably in advance of the sowing season with respect to each crop, and arrangements should be made to purchase directly, whenever necessary, the crops produced.

"(5) The introduction of State trading in whole sale trade in food grains is welcomed and should be fully given effect to.

"(6) Every effort should be made to bring the uncultivated and wasteland into cultivation. The Central Government should appoint a committee to devise suitable measures for the utilisation of this land."

The resolution, to put it mildly, is Utopian in conception and impracticable in execution in the present agrarian conditions in the country. In their anxiety to establish Socialist Pattern of Society, the Congress leaders seem to

ignore the realities of the Indian agrarian conditions, where the psychology of the peasants, their superstitious attachment to land, illiteracy, faction-ridden atmosphere of the villages, age-old conservatism and above all dearth of capable human material to manage joint farming operations hardly provide favourable chance to give practical shape to the resolution on a country-wide scale in the near future and for a long time to come. The passing of such a resolution by the Congress, which has no chance of being accepted by the mass of Indian peasantry, is nothing short of mis-adventure and would defeat the very objective of increased food and agricultural production for which it is intended.

Opposition To The Move

It is no wonder that such a wrong move is opposed by Independent group in the 'Lok Sabha' headed by Shri M. R. Masani. India's elder statesman and Ex-Governor General, Shri C. Rajgopalachari, see in it encouragement to coercion and tyranny. Parliamentary Secretary of the Congress Prof. Ranga felt compelled to resign from the Congress Parliamentary party and also from the Congress to oppose this move. And, the Ex-Food Minister of the Union and Ex--Governor of Uttar Pradesh Shri K. M. Munshi has challenged the move in a press statement, which in his view, will lead to dispotism in the country. We have no doubt, that if Congress administrations persisted in giving practical shape to this revolutionary resolution it will open straight road to revolution, creating split in the Congress itself and leading to large-scale strife and bloodshed all over the country.

It is rather strange in this connection that a faction-ridden body like the Congress, whose members largely keep busy fighting between themselves and pulling down each other should envisage honest and efficient functioning of Panchayats and Co-operative organisations all over the country, who in their view, would successfully be able to handle the complicated task of managing co-operative farms to the satisfaction of the members joining them. That shows the height of credulity and unrealistic thinking on the part of the Congress leaders, who are prone to introduce Utopian measures against the most depressing and unresponsive background obtaining in Indian villages.

Shri Munshi, in reply to the criticism of the Prime Minister, has raised 3 valid points in a press statement which are worthy of serious consideration by the authorities in this respect:—

"First, co-operative farming, wherever tried in India, had failed. This is a question of fact and requires an objective and dispassionate inquiry by experts before the contrary is accepted.

"Secondly, nowhere in the world has co-operative forming on a voluntary basis worked. Even when coercion has been used, as in the case of collective farming in totalitarian countries, food production has not increased. This again is a matter for objective study and not for polemics.

"Thirdly, in the absence of adequate and enforceable safeguards, which have not so far been authoritatively foreshadowed, zealous legislators, Ministers and bureaucrats, impelled by vague slogans, are sure to drive farmers into joining farming co-operatives against their will."

Dangerous Consequences

The experience of co-operative farming with a view to increasing agricultural production has not at all been cnouraging in this country to start on this mis-adventure which the Congress resolution aims at. Unless coercion is used by the State, which step is fraught with grave consequences, there is no possibility of the people coming together on a voluntary basis to pool their lands and resources in the interest of co-oparative and joint farming even in the course of a generation. The dangers inherent in such an immature and unwise move have

been stated by Shri M. R. Masani in the Lok Sabha while speaking on the motion of thanks to the President for his address :—

"It was all a resolution for collective farming on the Soviet-Chinese pattern and not for genuine co-operative farming.

"He and the Independent Parliamentary Group opposed "this insidious attempt to bring in collective farming by the backdoor.

"Collective farming—or co-operative farming of that type—had failed to increase production. In fact, production had invariably fallen whether it had been tried in a Communist country or otherwise.

"Russia lagged behind the rest of the world in production per acre and per man; Yugoslavia abandoned collective farming; and Poland, which tried collective farming in its Stalinist phase, was forced to give it up.

"By pooling land, by bringing in methods of rationalisation or mechanisation, you reduce the need for labour......Co-operative farming is the last remedy to try when you want to put more men on the job," Collectivisation, was not part of democratic socialism in any part of the free world. No democratic socialist could possibly want to uproot peasant farming from the country.

"Every measure of co-ordination and co-operation, so long as the farm was left in possession of the family and the man-land nexus was not disturbed is welcome. But if boundaries were uprooted and land taken away from peasants, it would be a move towards totalitarian collective farming.

"The ruling party had set its feet on the wrong road, wrong from the point of view of public morality, wrong from the point of view of a free society and also from the point of view of self-interest.

"Those who thought they could persuade the Indian peasantry to give up their lands and 'become landless serfs again for a super-zamindari, in Delhi or the State capital" were living in a fool's paradise.

"If the Government made a "serious attempt" to introduce co-operative farming by threats and coercion, "it will unfortunately lead to civil war and bloodshed and the death of thousands of people in this country."

The resolution, if acted upon, marks the end of Democratic Socialism adopted by the country and ushers in the dangerous phase of Totalitarian regime on the model of Soviet-Russia and China. Such a revolutionary step towards ideological change must of necessity be accompanied by coercion, tyranny and large-scale bloodshed and would be stoutly resisted in this country. It is time, the ruling party should give serious thought to the grave implications of their immature and unwise move which is obviously fraught with dangerous consequences to the country.

APPROACH TO THE THIRD PLAN

By : Prof. S. V. RAMAYA

WHAT shall be the approach to the Third Plan? What shall be the magnitude of the plan and if given such a magnitude, how are the resources to be raised ?

Any approach to the Third Plan must take into account the present trend in planning, the precarious factors that have arisen - the rising trend of unemployment - the rising price level—the increasing dependence on foreign loans and the deficiency exhibited in the agricultural sector. Naturally the Third Plan must aim at stabilising the price level (which in turn imposes a limitation on the deficit financing to be attempted in this period) and provide greater employment opportunities, increase the efficiency on the agricultural front and make our economy less reliant on foreign loans. The above factors have a great bearing on the magnitude of the plan and the roles to be assigned to the different sectors in the economy.

Accepting agricultural development to be the backbone of the plan what should be the magnitude of the plan. It must be bigger in terms of physical targets than that of the Second Plan cannot be debated. It is suggested that the pace of industrialization should be rapid and in this plan, more steel plants, heavy electrical plants etc. have to be started which would make us self-sufficient in capital goods and less reliant on foreign imports (to that extent the demands for foreign aid in the successive plans would be less) and the third plan period is a crucial period and if we lay solid foundation we will be creating an economy which will be self sustaining and self generating and the burden of the successive plans would be less.

We would have less reason to disagree with the above provided efficiency in agricultural and industrial sectors have been high. Prof. Galbraith points out "a purely agricultural country is likely to be unprogressive even in its agriculture". Industrialisation creates a technology which can then be applied to agriculture but not vice versa. Agricultural production in our country is not rising correspondingly is evident from the chronic food deficits and huge imports.

So the Third Plan must aim at increasing the food producton more especially rice production. The food problem of India is said to be the rice problem. We have the lowest yield per acre in the world. In China it is reported that from each acre of land the crop production has increased from 3 to 8 times of what it was. The Third Plan must aim therefore of doubling our food production. This is a modest aim. Inspite of the appointment of the committees to go through the issue from time to time and inspite of the more or less uniform recommendations of these committees for better seeds, more fertilizers, scientific methods of cultivation, better water facilities through major and minor irrigation works, more and better warehouses and better and cheaper credit depending on the productive capacity of the loan rather than the credit-worthiness of the cultivator, there is no perceptible increase in the agricultural production.

It is learnt that additonal irrigational facilities were not utilised due to various reasons. The administration has not evidently risen to adopt itself to the needs of the developing economy. As Prof. Gunnar Myrdal in his book "An International Economy" aptly remarks, "The helpless yielding to continuous inflation also points to the fact that the development of manufacturing industry and the rise of modern cities have not so far been everywhere accompanied by equally ardent and successful attempts to raise productivity in agriculture. This should not surprise us too much; for effective measures to raise productivity in agriculture are bound up with land reforms, literacy drives and other fundamental political and social changes that turn against the entrenched vested interests of private classes."

In this context, we welcome the resolution on Agrarian Organisational Pattern of the Congress Session in Nagpur. "The future agrarian pattern should be that of co-operative joint farming in which the land will be pooled for joint cultivation, the farmers continuing to retain their property-rights and getting a share from the net produce in proportion to their land." But whether these measures would lead to social and economic justice and increases in agricultural production are matters that must receive our close attention, for the success of the co-operation depends on the excellence of the human personality.

Next we hold that the Third Plan must apply itself to creating increasing employment opportunities to the people. In the second plan period we are witnessing increases in unemployment personnel, perhaps because population trend has been moving faster than assumed. The rise in the number of educated unemployed and at the same time, the paucity of technical personnel present a strange phenomenon. This lack of purpose and co-ordination between education and employment need be viewed with grave concern. The diversion of large number of candidates after matriculation to the Technical schools and the need to restrict entrants to the University are issues that deserve careful consideration. As per our estimates the second plan would not be able to provide employment for more than 5 million people. So on the eve of the third plan the back-log of unemployment would be of the order of 10 million. Added to this the number seeking employment in the third plan would come to 12.5 million. So the total number seeking employment can be put at 22.5 million people. The Planning Commission therefore must apply itself to this task and the role to be assigned to the small-scale and village-industries must be viewed in this light.

A matter that is very relevant to the employment aspect is the growth of population. "Population increase hovers like a menacing cloud over all poor countries. It can offset and more than offset the contribution to economic prosperity which all other factors can make". The Third plan must also aim at spreading the idea of family planning. We should not expect that our programme would yield quick results. The success of the programme itself depends on the spread of education, better economic life, better medical facilities and changes in the pattern of thinking. The Third Plan must aim at training about 5 lakhs of social workers to enable them to do the spade work. The experts of the Sixth International Conference on planned parenthood thought that unless the birth-rate was reduced, India would be unable to achieve an economic breakthrough from its state of under development and unemployment to a developed economy. Sir Julian Huxley said, "From a purely economic stand point, expenditure on population control is one of the most profitable forms of investment for India". The opening of more medical clinics is also mooted. Our experience has been that in the hospitals an attitude of indifference and callousness prevails. With a few exceptions, the atmosphere is not at all conducive to the people for opting the services of the clinics. Complaints of indifference must receive highest priority from the high quarters and swift and prompt action has to be taken against the erring officials.

Having laid down a few precipes for the Planning Commission of the needs of the Third Plan we come to the magnitude of the plan which must be bigger than that of the second plan in physical targets. The requirements of foreign exchange and the raising of internal resources must receive careful assessment. When we talk of foreign exchange needs, we have to remember that an amount Rs. 600 crores would fall due for repayment during this period. Whether our plan should rely for its prosecution on the availability of foreign exchange resources is a matter that requires rethinking. The proper phasing of the imports (and the quick returns in production) and the elimination of the bottlenecks in internal production to stimulate exports (by making export industries conform to specific standards of efficiency) are matters that have to be carefully planned. "Import restrictions

in underdeveloped countries are primarily necessitated by the effects on the foreign exchange balance of the increased demand for imported goods. This, in turn, is the direct or indirect result of the increased investments implied in an economic development policy"

The loans that we receive must be conducive to rapid economic development so as to generate exportable surpluses to enable us to repay them. The Soviet Union, in its early stages of economic development, could export huge quantities of food grains for repaying the imports. China at present has increased her rice, coal, cloth production phenomenally and is in a position to export these for its imports. So our efficiency on the agricultural front has to be strengthened so as to provide food for our people, raw-materials for our industries and the foreign exchange for our imports. Lenin's saying about cereals being the "currency of all currencies" holds good for all countries and for all forms of planning. Tentative proposals are made that the Third Plan may be of the order of Rs. 10,000 crores at 1952-53 price-levels. As the price level has risen by 10%, we can say that at the present level of prices the plan outlay would come to Rs. 11,000 crores. Whether we would be able to stick to this magnitude would depend upon our mobilisation of internal resources and stabilising the price levels, lest the calculations be upset due to inflation.

We agree, there is a great scope for increasing our domestic resources by mobilising them properly. It is often complained that the incidence of taxation on rural population is very low and that the farmers should be made to pay higher taxation. Prof. Kaldor in his report on Indian Tax Reform says, " At present the total revenue raised in taxation by the Centre and the States is a little over 7 percent of the national income and on the record of the last 5 or 6 years, the tax revenue does not exhibit that natural buoyancy (i. e.) the automatic rise in yields with the national production and increase in income-which is a common feature of the Tax systems of western countries ". The First Plan has resulted in an increase of 18% in National Income and the Second Plan is raising the National Income by 25%, but the proportion of revenues flowing to coffers of the Govt. is not increasing. It is argued that as the People's incomes are increasing (the plans are assumed to benefit poorer and middle-class people), these classes should contribute more to the Government. This line of reasoning is based on the assumption of people deriving equitable increases in incomes due to the plans. Before we call upon these people to sacrifice further and tighten their belts, it would be desirable to know the patterns of income distribution. The poorer and middle classes are groaning under the burdens of soaring prices. The greatest beneficiaries of the plans are the merchants, landlords, contractors and the mill owners. So any tax system should bring into net these classes, so as to lessen the burden on the other sections of the community. We suggest the following measures for mobilising the internal resources :—

1. Increases of land revenue by 100%. The revenues may be spent on the development programmes of the local areas. Prof. Kaldor remaks, "The land revenue at present (is around Rs. 50 crores) amounts to only 1% of the net product of agriculture. Even if the yield were doubled it would clearly not represent an excessive burden".

2. Imposition of salt Tax-The amounts of benfit accruing to the individual because of its absence is negligible.

3. Scrapping of prohibition-The introduction of Prohibition has not resulted in any benefit to the masses. On the other hand it has resulted in heavy loss of revenue and created corruption in the ranks of the enforcing officials.

4. Compulsory insurance schemes should be introduced in all the public, private and rural areas for all the people having incomes of Rs. 4000 per year.

5. Compulsory institution of provident fund schemes may be made for all the people in Government, semi-Government and industrial undertakings employing more that 100 people.

6. The Creation of a special Fund called the "Plan Fund" is called for.

All people working in public or private establishments and Government servants, drawing more than Rs. 1000/- per month, should be called upon to contribute the excess (over Rs. 1000/-) amount as loan ear-marked as the "Plan Fund". This amount would be repaid only after 25 years. For Government servants the scheme may be made compulsory and for others voluntary. The T. E. C., has suggested that the maximum income of an individual must not be more than 30 times the per capita income. This would incidentally put a stop to an ostentatious display and may inculcate amongst the people habits of simple living. This would also be in consonance with Gandhiji's dream of "Samyavad" where through voluntary efforts, great results are achieved.

7. Imposition of betterment levies. To mitigate their burden the collection may be spread over 10 to 20 years.

8. Plugging up the loopholes in the existing tax structure. Prof. Kaldor was surprised at the great amount of evasion of taxes in our country. The yields from the new taxes like wealth, expenditure, gift and estate duties have been far below the budget estimates. Of course, these taxes are not expected to rasult in large revenues but only to check evasions in the other fields. That these expectations have not been fulfilled is evident from Prof. Kaldor's statement. The Hungarian economist suggests a comprehensive return indicating income, wealth, assets, exp. etc of on individual to be submitted to the taxing authorities.

9 Institution of small Savings schemes in every Panchayat, factory, industrial establishment, hostel, school, college, university and in Government office.

10 Imposition of more excise duties on Dalda, matches, paper etc.

Some of the above measures suggested may result in substantial increases in revenue. To carry the plan of the magnitude envisaged we need a different administration. It is offen felt that we have substituted brown bureaucracy for white bureaucracy. Such a feeling is fatal for planning in a democracy. Unless there is a change in the attitude of the officials towards the people not much can be achieved. The approach of the officials must be one of humility and they must be prepared to teach as well as to learn. Our Prime Minister has been stressing this often. We suggest that the officials may be given refresher courses in Psychology, Sociology and may be made to do manual labour two hours everyday, so as to enable them to shed their complex and make them feel that they are really people's servants. This is the time to remember Gandhiji's teachings and follow them so that we may not be accused of preaching one thing and practising another.

We also plead for an industrial truce. Any strike in any of the industries will strike at production and planning. The

wage demands must be related to efficiencies in labour and industries. Of course, all this implies that the cost of living will not be rising. We have to proceed rapidly to improve the living conditions of the people. "Population pressure will tend to increase, partly because of the availability of cheap means of bringing down the death rate even without a rise in the standard of living. The relative pressure will become stronger, the less economic development there is. In this situation there is no choice open between wanting a slower or faster rate of economic development. Every Government will have to do its utmost to push on as fast as possible. A slow rate of economic development inplies grave social and political dangers".

What shall be the place of deficit financing in the plan? As the plan is ambitious and involves huge expenditure generating incomes, any resort to deficit financing will aggravate the rising price-level. Even without resorting to deficit financing, pressures exerted on the price-levels will be greater. To meet these pressures we do not have foreign exchanges to import goods to act as cushions as had happened in the first plan period. Deficit financing will have a direct bearing on price-levels and will generate inflationary pressures which will in turn lead to persistent demands for higher wages and will have repercussions on costs of production and financial estimates. Hence this method of finance should be ruled out of our scope.

India in Cottages

PROSPECTS OF CO-OPERATIVE FARMING IN INDIA

By : S. P. SINHA

CO-OPERATIVE farming means pooling of land and joint management. This requires certain Social and Economic set up for its organisation and success. In India, the economic and social set up are not very congenial for its development. The present Social structure dominated by caste feelings, class cleavage and group rivalry does not permit Social harmony, homogeneousness or Social cohesion. Likewise, the economic structure based on private property, capitalistic operation of means of production, motive of profit, does not allow for any radical measure of economic reform to bring in Social justice or economic equality.

It is futile to believe that with private enterprise, profit motive, accumulation of capital and wealth in the industrial sector, it would be possible to induce co-operation in the agricultural sector. The farmers are, even at present, very much nervous and suspicious of our agrarian policies on account of our double-dealing. Any differential treatment of agriculture will arouse their natural suspicion and sabotage the efforts for co-operative farming.

Similarly present agrarian reforms, official or non-official are not tuned to the introduction of co-operative farming in India. All land reform efforts are aimed at strengthening the economic and Social status of individual farmer and at creating peasant proprietorship by abolishing zamindari ; ensuing security of tenure, fair rent ; restriction on land transfers and consolidation of holdings. Even Community Projects and National Extension Services are creating conditions for successful operation of individual peasant farms by helping the farmers in many ways.

Further, it is hoped that the non-official movement of Acharya Vinobaji in the form of Bhoodan and Gramdan will create an atmosphere for the development of co-operative farms. But Bhoodan, by redistributing land to those who do not have any land is creating a large number of peasant farmers and Gramdan, which is of course, the ideal which creates psychological or Social base for introducing co-operative farming, has not yet gained momentum. Moreover, in most of the cases, Gramdan has been possible in a Society which had Social cohesion, had no major economic conflicts, and was primitive and tribal in nature. Thus its success in a tribal economy, where the right of private property is not of great importance, cannot ensure its success in any other economy, where private property right is of great significance.

In this respect, it would not be out of place to say that even the Government policy is out of tune of our proclaimed intentions. In most of the cases where co-operative farms have been organised, they are alleged to have failed due to the unsympathetic attitude of the Government ; due to scarce credit resources, defective loan policy, and the lack of enthusiasm or incentive shown by the Government officials.

In foreign countries, special incentives were found either in the shape of State policy, official propaganda and pressure as in the case of U. S. S. R. and Eastern European countries, an extreme case of urgency and a historic mission as in the case of Palestine or a strong agrarian

revolution led by agrarian reformers, as in the case of China. On many occasions, many experts and committees have quoted the successful experiences of co-operative farming in China, but they forget that in China many of the agrarian problems were not very acute. In China, the problem of landless labour was not of such a great magnitude as that of India. Land tenures were comparatively simple and to add to all these their revolution was led by agrarian reformers and not by urban bourgeoise and enlightened section of top rural elite as is the case, in India.

In India, the Indian peasants, in the present Social and Economic set up are not attracted by the idea of co-operative farming. Nor do our political system or political parties encourage them. With democracy, with hostile political parties, it is not possible to organise co-operative farms. In China co-operative farming was successful due to a dictatorial nature of political system.

Further, the experiences of the co-operative farming in India bring out certain important factors. Almost all experts agree that the co-operative farms have failed due to group rivalry; personal jealousies, love of independence, lack of leadership and bad management. In the present circumstances, with our defective party system, with group rivalry, with caste feeling and prejudices, it is not expected that the conditions will improve very much in the villages in the near future.

Even in Gramdan villages, where a change of beart has been possible, where fellow-feeling has been demonstrated and where class or caste rivalry is reported to be non-existing; there is dearth of leadership and trained personnel to manage co-operative farms and to take up the responsibility of all the risks involved in managing co-operative farms and in providing full Social and Economic security to all people. Shri Patil has made a suggestion to train personnel, but these trained personnnels would be no better than the present stock of officials devoid of any missionary zeal. They cannot lead the peasants. Leadership must come from within. It is the work of people, political parties, and our political parties with their groups and factions, with dearth of leadership, cannot perform this function.

However, sometimes it is suggested that this problem can be solved with the establishment of Panchayat Raj. But we know that most Grampanchayats are suffering from lack of unity and solidarity, group rivalry, caste and class feelings. Grampanchayats include three or four villages under their perview. They are run by leaders who are neither very educated nor possess technical qualifications. It is easy to make arrangements for sanitation, education, road and tanks but quite difficult to run co-operative farms comprising of many farmers and with complicated problems of 'norm' determination, man-management, mass-mobilisation of resources, and maintenance of accounts. Thus the present level of education, social and economic standard, moral values are not sufficient to warrant a presumption that with Panchayat Raj co-operative farms can be formed and operated with success.

In the present social and economic set up, I doubt, if our efforts for the formation of co-operative farms will, at all, be successful. It is admitted that co-operative farms are good and economical, but it requires a complete set of new conditions. It requires a complete structural change in all spheres, in industries as well as in agriculture, in administration, in social and economic standard, in education and to be more

particular in our political system and political parties. Pilot projects in new areas, in waste lands, in refugee colonies do not indicate any extraordinary force or zeal for co-operation.

Thus in the present circumstances, more intensified co-operative services would be more useful because it has all its accompaniments of success as for example, present day land reforms; democratic form of Government, Gram-panchayats, Community Projects and National Extension Services. Therefore, it would be more useful to divert energies and resources to the re-organisation of service co-operatives on a better footing so that it may be tuned to the varied requirements of our farmers. Then only, with service co-operatives to help farmers, with Gram panchayats to look after roads, education, sanitation and with C. P. and N. E. S. to extend and to disseminate technical knowledge to farmers, our agricultural production will increase and democracy will have better footing in our country.

AGRARIAN REFORMS AND PATTERN*

By: **OBSERVER**

JUST as the Lahore resolution (1929) declaring complete Independence as the goal of the Congress, the two Nagpur resolutions (1959), on Planning and Agrarian reforms, are associated with Pandit Nehru. They proclaim a distinguishing quality of a bold and inspiring leadership —the need of the country at present. Granting that Socialist approach and technique provide the mighty way for under-developed and densely populated hoary country as India to liquidate poverty and to escape the pull of conditions of near stagnation, and for national progress and prosperity, the scope of the article is restricted to a brief, disinterested, independent analysis of the Congress resolution on the Agrarian Reforms and Pattern.

The recommendations of the A. I. C. C. Agricultural Production Sub-Committee's report and the contents of the Resolution as finally adopted, may be grouped under the following heads: (i) abolition of the intermediary estatedars or non-ryotwari tenures mostly (ii) concept of personal cultivation, giving security of tenure, fixation of rents, prevention of ejectment of tenants and their restoration etc. as an interim arrangement (iii) abolition of tenancy itself and transforming tenants into owners (iv) ceilings on current and future holdings on area and not on income basis (v) strengthening rural institutions and vesting of lands in the village Panchayats (vi) cultivation of surplus lands etc. by co-operative farming societies of landless labour (vii) establishment of service co-operatives (viii) encouragement of joint co-operative farming in the future agrarian pattern and its expansion, and (ix) other measures as improving crop yields per acre, fixing floor prices of crops and state-trading in food grains.

The above, especially as laid down in the Resolution, leave out details and even omit certain important aspects of the items probably with a view to reduce the area of controversy within the Congress itself on things like 'compensation' for the time being, and since they have to be

1 The opinions expressed in the article represent the personal views of the author only.

worked out by experts and State governments in due course. So the resolution is naturally in the shape of some directive principles rather than a blue print in so many words.

The resolution marks also a step farther than the sub-committee's report in some respects. It is radical in approach and therefore simplifies many knotty problems and is most amenable to planning for a democratic socialist society which is declared as our national direction. If implementation does not deviate from the declaration, it will arouse public enthusiasm and may forge national unity, particularly among the progressive organisations to a measure comparable to the pre-war years. To what extent the contents of the resolution would be reflected in the legislation to be enacted in all the States by the end of 1959, and whether and to what extent they would be actually implemented before the next general elections in the country are relevant political questions; but for the following economic analysis the full implementation is assumed in the immediate future.

Some of the above items are taken up seriatim and briefly discussed:- (i) The abolition of the intermediary estatedars is nearly completed, for the area collectively held by them is now reduced to less than 8% of the total cultivated area in the country. Passing legislation on the rest of the area before the current year is not difficult. The project of expropriation of the Zamindars, Malguzars, Jagirdars and so forth is partly rendered simple because of the anti-national role of some of them in the period prior to the assumption of power by the Congress. The underlying motive in the zamindari-abolition was not merely the loss of revenue to Government due to their privileged tenure settlements, nor the oppression of the peasantry under them, but something higher which cannot be achieved without recourse to the direct method of their abolition for national reconstruction.

In such a scheme some hardship was caused to the petty-estatedars who acquired the 'estate' land through purchase and/or held shares of six naye paise and less in the estates concerned making up a meagre few acres under them. The process could have become less painful, if in the case of petty-estatedars [2] having an acreage, or income, less than a prescribed minimum, their names were struck off from the corresponding list of Zamindars, Inamdars etc. and given "pattas' under the Ryotwari system after duly revising the land revenue and local cess in step with the ryotwari pattas, or alternatively, they were allowed to hold a portion of the land under them in lieu of the compensation payable to them in preference to the complex method of their abolition compensation, rehabilitation grants and so on adopted in most States. For anything, the writ-petitions and the like are always there, and provision could be made to meet the legal difficulties, if any, to follow up my above suggestion.

(ii) To-date the pace of enactment under the head was fitful and tardy. In States where Acts were passed and, to a certain degree, implemented, they did not produce the desired results due to loopholes in the legislation, the circumvention of the provisions of the Acts by the land-holders through clever devices and at times, as though it were with the silent, understandable sympathy of individual legislators, and even some State governments inorder to help the affected interests to adjust themselves to the new situation naturally and gradually. In addition, wide variations occur

2. Vide. Ch. XI, The Agrarian Problems of Madras Province, 1949 by V. V. Sayana.

in the rates of rent, periods of lease, recognition of tenants, and the protection given to them under tenancy in various States. Hence it has become absolutely necessary to draw attention to the settled concept of 'personal cultivation' with associated characteristics of risk-bearing and personal supervision in farming, and also personal labour in respect of resumption of tenanted land for personal cultivation; and to endorse other recommendations of the Second-Plan on maximum rates of rent, security of tenure etc. Prevention of eviction of cultivating tenants and, in particular, restoration of lands to the formerly ejected tenants would place many a State Government to serious test as to the effectiveness of implementing land reforms. A crop-sharer too is recognised as tenant for all purposes and as such importance is attached to crop-sharing as a tenancy pattern.

The bulk of the legislation enacted in the country and outlined in the First and the Second Five-Year Plans may fall under the preceding two heads. The rest of the items in the Resolution break new ground that may be considered in preparation of the Third-Plan.

(iii) The proposition for prohibiting the institution of tenancy and conferring ownership rights to tenants on the leased land is a radical one which registers a break from the thinking of the First & Second Plans, and also of the Congress Party especially since Independence. Some of the causes leading upto such a revolutionary proposal are indicated earlier. Aside from the inadequasy of the previous legislation under item (ii), another driving urge behind the recommendation is perhaps the conclusion that tenancy is not conducive to good farming and maximisation of agricultural production in Indian conditions, to discourage dual preoccupation or attachment among professions other than farming or to establish peasant proprietorship. The organised compaign of interested landlords has made its own contribution to it.

The range of concessions made formerly for leasing out lands of religious, educational, charitable institutions, widows and minors, military personnel during the period of their service, seems to be narrowed down to those, subject to some 'disabilities etc'. It is obvious that the last four constitute an irreducible minimum in the context though in case of the first three the lands can be taken over by the Panchayats or other local bodies and arrangements made for proper maintenance of the respective institutions or objects for which the Trusts or Gifts are made. Where letting of land is permitted, the lease cannot be made over directly to any one by the owners, as those lands are to be operated through co-operatives.

Obviously, here are some loose threads to be tightened up. The political and social consequences of the recommendation are many and complex. It is strikingly evident, when applied in the context of those middle class and the lower middle class persons who are forced to leave their villages in search of bread and employment, and to engage themselves in other occupations as service, trade, industry etc., since their income from land is too meagre to support them on farming. It may dislocate, and add to the existing demographic pressure on land, besides causing immense hardship to many of them, if low compensation is paid to such groups or their incomes in their existing occupations are not sufficiently made up.

Economically, those strata of income-groups affected by it are no better than those whom it is aimed to benefit. The first reaction of anybody to the proposal is unfavourable, not because for want of

sympathy to the cultivating tenants, but because it is now less meaningful to confer ownership rights on tenants, when establishment of family-farms or peasant proprietorship is no longer the final objective in the proposed agrarian pattern as per the latest line in the Resolution. It appears better to pool all such land into tenant-co-operative farming societies—as distinct from co-operatives of landless labour and joint co-operative farming ones–and pay rent at prescribed rates under the Second Plan by way of compensation, on a sliding scale if preferred, for a specified period to make readjustment easy even in the rapidly evolving national economy. The Panchayat too can play its part in the matter. In short it may suffice to underline here that the implications of the measure merit the most careful consideration and not a quick disposal.

(iv) The largest organised opposition of the interests concerned in land has been directed against imposition of ceilings on agricultural land, particularly on existing holdings. It is imperative for placing maximum limit on size of holding, for (a) it is a logical step of agrarian reforms after abolition of the zamindaries etc. (b) if ceilings are not imposed it may mean discrimination and double standards, one for the ryotwari areas and another for the non-ryotwari areas and (c) encouraging intensive land-use, discouraging concentration of means of production in private hands, social justice, and the practical needs of planning for socialist society and so on.

The present writer was always of the opinion that ceilings should be expressed in terms of area of land (preferably in standard acres) and never in term of 'net-income'. Net-income' and 'real-income' are not one and the same, owing to the marked variation in the purchasing power of a given amount of money over goods and services in different localities; income ceiling puts a premium on inefficient farmers, and intensive farming and land utilisation are mulcated; and the irresistible tendency of income-comparisons possibly exert pressure for fixing ceiling at higher levels by the Governments and also for extension of the same principle duly to other spheres consistent with expediency and national progress from time to time.[3] The subject of ceilings is so wide and important as to justify a separate article. Therefore, to refrain from adding further to the controversy on the matter, I commend the view expressed in the Resolution in this connection viz., "This does not mean any ceiling on income, as it is expected that by intensive cultivation as well as by additional occupations rural incomes will rise".

However, no mention is made about exemptions under 'ceilings' and on the delicate question of 'compensation'. More light has to come from State capitals which is not an easy-go for the administration in some States without occasion to shift the onus to the Planning Commission or the Congress High Command in the final stage. Prima facie, in a Socialist Society, there cannot be a valid objection to work up gradually to a state of things where education, art religion, welfare of the people will become more and more a first charge on the Community and the State, when those on private-donor basis would be considered as having served their purpose by integrating and absorbing them with the over-all public function.

(v) To strengthen the village as a basic political and socio-economic unit, the village institutions as the Panchayat, the Co-operative, and the School are to be streamlined. "The organisation of the

3. Vide. An unpublished Paper by V. V. Sayana dated, July, 1958.

village should be based on village Panchayats and village Co-operatives both of which should have adequate powers and resources to discharge the functions alloted to them. A number of village co-operatives may form themselves into a Union..Both the Panchapat and the Co-operative should be the spearheads of all development activities within the village", especially to encourage intensive farming for raising the per acre yields of agricultural produce.

Probably, to that end the surplus lands, consequent on ceilings, are to vest in the Panchayat, as also lapsed cultivable uncultivated lands of individual holders as a result of keeping them waste over three years as laid down; permitted leasable lands of certain persons subjected to disabilities etc; and possibly the Government waste or 'banjar' lands to be examined by a high-power government committee, when appointed and when the lands are not assigned directly to individual landless labourers and/or political sufferers in the States. It apparently tend to reverse the current trend of distribution of government lands in a few States and it creates a new type of Panchayat tenure, after abolition of nearly all non-ryotwari tenurial patterns in the last one decade. Panchayat tenure may resemble in a way the "Ejido" in Mexico, or the Mahalwari settlement in the northern part of India. But it is actually a cross between the "ejido" and the Co-operative farming. Transferring ownership to the Panchayat and delegating the functional responsibility of utilisation of the lands to co-operative give rise to dual control and complexities, unless the political system in the country is monotypic. For example, a Secretary of a State Communist Party claimed recently that in one south State his party had control over 1500 village Panchayats. In another instance, should some co-operatives form themselves into a union on economic reasons, when there is no unity among the Panchayats concerned in the area on political grounds, the cold war situation can well be imagined. Thus it seems better to demarcate clearly the basic functions between the Panchayat and the Co-operative, allotting political, civic and other overall general functions to the former, and economic matters to the Co-operative and for convenience keeping frictionless matters on the concurrent (or the common) list between the two. If it is assumed on the other hand that vesting of ownership of lands in the Panchayat is initially made as a *temporary expedient*, until the Co-operatives take root and grow, then some built-in stabilisers or safety-valves have to be devised when the need arises to meet the possibility, though some of them can be visualised well in advance. However it is to be underlined that co-operative farming under State guidance and vigilance is a known thing in socialist economy and even non-socialist countries while Panchayat tenure and the Village-management type of farming are Utopian and probably not workable, besides the tremendous task of organising Panchayat throughout the country where they do not exist at present.

(vi) Furthermore, transferring surplus lands to the Panchayat has a partial implication of something like nationalisation requiring a special arrangement in respect of payment of perhaps relatively high compensation etc. to the effected land-owners. Since the lands are to be worked through co-operative farming societies of wholly landless labour, the burden would be heavier too as not only seeds, manures etc. have to be provided, but also farming equipment, like ploughs work animals, farm implements, and even consumption requirements have to

be advanced by Co-operative Farming Society in conjunction with the Panchayat. In the selection of the members of the Society, care has to be taken to see that they have farming experience, in which case a manager-type permanent farm servant (and not cattle boy) has to be preferred to a day or casual rural labour, at least a handful of them to provide leadership. It is also important that the selection should not turn out to be patronage, political, communal, or personal. Instead, the success of the Society must be the guiding criterion.

(vii) The establishment of the Service Co-operatives initially, within the first three years, met with least criticism. To quote the Resolution, "All permanent residents of the village, whether owning land or not, should be eligible for membership of the village co-operative which should promote the welfare of its member by introducing progressive farming methods and improved techniques of cultivation and encouraging cottage industries. In addition to providing credit and discharging other servicing functions, it will arrange for pooling and marketing agricultural produce of farmers and for storage and godown facilities for them."

Thus what is contemplated is a multipurpose agro-industrial co-operative to cater to the all-round needs of farmers, artisans and to small scale industries. The Co-operative, as envisaged, would admit of utilisation of the experience and knowledge of the village money-lenders, people in trade and business, as well as a few professionals including retired persons for the benefit of the Co-operative. Whereas "One Village, One Co-operative" has the directness and simplicity as an effective slogan, yet in certain circumstances, it is advantageous to lay emphasis on the Union rather than on the individual units of Co-operatives from the economic angle.

Similarly, it will be convenient to establish godowns and storages for a group of villages at points of easy access to the best available communications. Sooner or later, a time will come, when some of the villages are to be re-organised so as to make the 'Village' a suitable socio-economic and political unit for discharging effectively the new and expanding role assigned to it.

But to establish service-co-operatives throughout the country within a short period of three years imposes a tremendous responsibility on State administration as well as the influential organisations like the Congress and others at the village level. If it is done within the time limit, it is in itself a great achievement. But without laying a strong foundation, a spectacular expansion without adequte trained personnel necessary orientation and even a bit of indoctrination, the effects are unpredictable. However, when the necessary atmosphere and the conditions are created, co-operatives are bound to succeed under planning for a socialist society, given the character and determined effort of all concerned. The recent transfer of 'co-operation' to the Community Development Ministry at the Centre is a step in the right direction, but within its fold Co-operation has to be made a separate Ministry under the charge of a good-organiser with a missionary zeal.

(viii) After a period of three years in which it is expected that sufficient experience in organising village co-operatives would be gained and also the needed psychological and educational ground implanted in the minds of the rural folks, the setting up of the Joint Co-operative-Farming Societies have to be vigourously taken up, although even within the period the starting of such joint cultiva-

tion by farmers where possible, is not precluded. But joint co-operative farming, to be successful, should be limited in its membership to permanent residents or families owning land in the village, whatever be the size of the plots. Hence the statement in the Resolution, "those who actually work on the land, whether they *'own the land or not'* will get a share in proportion to the work put in by them on the joint farm" has to be suitably revised. If the membership is restricted to owners of land only, after assessing the utilisable labour supply out of the members and their families (family to be defined for the purpose), the additional labour requirement may be engaged on wages as casual or seasonal labour.

There are yet some other practical considerations viz., weightage to be given to capital and farming equipment of varying value and efficiency in calculating "the share from the net produce" accrueable to the portions of land contributed for which no provision seems to have been made in the Resolution. As the area of the land contributed is to be reduced to standard acres according to its productivity, labour also needs to be graded as 'superior' good and ordinary' according to efficiency of performance, to be reviewed periodically for the purpose of payment. When crops fail, as in case of rent, priority falls on remunerating the services of labour as against land and equipment. The pooled land, of course, has to be divided into convenient blocks of manageable size according to crops grown, nature of soils, etc. for operation by a group of farmers most suited for the particular operations of the block irrespective of who owns the area in the block, subject to the overall supervision and discretion and self-criticism of the joint co-operative managing body. Watchfulness is necessary to ensure that some of the joint co-operative farms might not pass under the influence of substantial landholders, as in case of joint stock company management, when the results are baneful and not beneficial. There are also other matters as provision of technical, audit and other usual facilities generally accorded to co-operatives by the State, as well as the need to provide supplementary occupations to the families associated with the joint co-operative farming society.

In the ultimate analysis, joint Co-operative farming is sought as a solution for the many ills of the agrarian problems especially for adoption of progressive farming methods, and improved techniques of farming to raise crop yields per acre and to achieve the benefits of land consolidation to help solve the difficult problems of undersized holdings and sub-marginal farmers. Joint co-perative farming is an intermediary stage leading upto something else, as it is loose in organisation and cumbersome administratively. Hence it is expected that gradually, they would be up-graded into Co-operative farming societies by the organisational-economic strengthening of the joint co-operative farming. As observed earlier, there is no question of 'Co-operation' not succeeding under conditions of socialist economy which implies a certain degree of compulsion, if unavoidable in the public interest.

(iv) Lastly, other measures as raising crop yields, fixing floor prices of important crops, and in the current situation, State Trading in Food Grains are sound in principle. The last one is useful in the interests of the consumer and producer as well for stimulating production and for promoting the economic well-being of society",[4] aside from being an attractive source of income

4. Vide. Readings in Rural Problems by V. V. Sayana, Ch. IX, March, 1950.

to the States. Soon it will make way for socialised Marketing system in strategic commodities.

To conclude, as a sequence of the above reforms, the picture that emerges in the near future is clear. But the question probably still remains in the air: whether the Resolution is interpreted as 'recommendatory and not mandatory,' or how far and when the centents of the Congress resolution would be actually implemented in all the States. There is no doubt that the answer would be resolved in the matrix of time.

PLANNING FOR ECONOMIC INTENSIVE FARMING

By : C. R. SHARMA

THERE are two straight ways of maximizing the crop production, one is to improve the standard of individual crop yields per acre and the other is to mature more crops per unit area in a year. This requires expert organization and mobilisation of farm resources combined with the fullest economic utilization of the farm products and by-products.

Intensive farming is practicable both in the irrigated and the rainfed areas, but in the latter case there are many limitations and the success depends mostly upon the standard of soil-and-moisture-conservation methods employed by the Agriculturist. As a result of extensive research work on crops, soils and fertilizers, the agriculture has been revolutionized into a new pattern, the old concepts have changed, and the objectives are now based mainly on economic needs and utilitarian justifications. It is intended to enumerate here some of the key points and considerations which can help a farmer to plan and practise intensive farming programme with better results.

1. Keeping of land Fallow :—

For improving the fertility of land or for increasing the crop yields, following is no more considered as indispensable. So far as the rain fall conditions and the irrigation facilities permit, it is, usually economical to raise another crop rather than leave the land fallow. Even if the costs of labour and cultivation involved for maintaining a fallow are excluded the economic returns from one-crop a-year practice (100% intensity) cannot compare with those from higher intensities of crops ranging between 125% and 200%. According to present practices Plant-nutrients can be directly applied to the new crop in the form of suitable doses of fertilizers and readily available manures, thus ensuring normal yields. Ordinarily when the irrigation facilities are adequate, a 'fallow' should not occur more than once or twice in a 2 to 3 years rotation, but in rainfed areas the intensity has to be adjusted according to the time and distribution of rain fall. A 'Fallow must be kept well cultivated and free from weeds. Where erosion of soil is a serious problem, of course, the land must be kept under a vegetative cover to avoid soil losses'.

2. Choice of crops :—

While preparing a cropping scheme, following points of views need consideration so as to adjudge the merits of a crop for its inclusion in the rotation.

(a) What crop to grow ?

Preference may be given to short season crops which occupy the land for a comparatively shorter period. For every tract there is a vast variety of cash crops, catch crops and cover crops for making a suitable choice.

Kharif crops provide a wide field of choice and a good range of adaptability. Some of the fodders and vegetables can be sown as early as the end of March, then follow the major sowings of fodders, grain crops, cash crops and pulses in April and May continuing well upto the end of July and the beginning of August. One or other Kharif crop therefore, can invariably precede a rabi crop. Sorghums, maize, chari and Sudangrass are early fodders, Moong, Moth, Urid, cowpeas and guara can be sown for grain or fodder, alone or in mixture with sorghum, and maize at any time throughout the season. Sunhemp, guara or any other legume can be grown as a green-manure crop. Cowpeas, Moong and Urid are short season crops; a recently evolved type, Moong No. 1 is very popular because we can raise 3 crops of this variety in the same season. Jowar, maize and teosinte can also be sown late for fodder or for grain.

Similarly there are rabi crops like rapes, turnips, gram, barley, berseem, senji and peas which are suitable for early sowings in September and October. Excluding berseem they are all ready pretty soon and vacate the land quite early thus permitting sufficient time for the preparation of land for the next Kharif sowings. Wheat, oats, metha, linseed and taramira can be sown as late as the end of December.

(b) Which variety to choose?

An intelligent farmer should always grow improved types of crops as recommended by the departments of Agriculture. For most of the important field crops there are a series of early and late maturing varieties evolved and approved by the State and the Central Departments of Agriculture; these are very convenient for making a good choice. Early maturing strains that have become popular are, Wheat N. P. 718, C 281, C. 228, C. 253, Oats; Brunkar 10, Western 11, 1. P. Hybrid 3, Rape: R. L. 16 early Potato: Up-to-date, Gola Military special, paddy: Mahlar No. 346 T. 125, T. 130, T. 165 cotton 216F and H-14, Moong type 1, China Moong selection Pb. and so on.

Most of these types are accredited with the quality of maturing about one to two weeks earlier than the normally popular varieties. Still they do not lag behind in the final yield Criterian. Some of these have an additional benefit of being tolerant or practically resistant or resistant to important diseases and pests. Many of these strains are ready for harvest before the active pathogen can prove harmful. Varieties of Wheat C 228 C 281, Oats Algerian, Fulghum and Jowar 29/1, which can give good yields even when sown late, are also valuable because under unavoidable circumstances when the field cannot be cultivated or irrigated in time, these varieties can come to the aid of the farmer. In fact while preparing the cropping scheme the object should be to plan for a uniform and full employment of the land, labour and animal power all along the year thus ensuring at the same time high economic returns on per acre and per crop basis.

(c) Fodder crops play a pivotal role in the intensive farming scheme because they are ready in a short period and are cut green. Moreover nitrogen being the chief agent for stimulating vegetative growth, a generous dose of nitrogenous fertilizers, alone or in combination with organic manures

can ensure high yield of green fodder. With adequate manuring Sorghum, Maize and Oats can give two cuttings of fodder when sown early. Moreover the residual effect of high doses of manures appplied to fodder crops can be utilised for the benefit of succeeding grain and cash crops.

Non-leguminous fodders when grown mixed with suitable legumes not only give higher forage yields with better nutritive values but also maintain the soil in a good heart. Sorghums and maize can be grown mixed with cowpeas and guara, Senji, metha and field peas, though now being replaced by berseem, can often suit as short season crops when the irrigation facilities are limited. Lucerne is a popular perennial fodder crop with moderate water requirements. It enriches the land and makes good mixture with grasses when raised in leys.

(d) **Legumes :—**

Inclusion of leguminous crops in the rotation is perhaps the most important single factor which can make farming profitable. The safest way is to grow one legume crop after every non-legume crop, but with adequate manuring even two non-leguminous crops can be raised after one fullfledged leguminous crop. Cereals, grasses and millets form good mixtures with legumes both for fodder and grain. Berseem, lucerne, Senji, guara and gram have become so popular for enriching the land, that important grain and cash crops like wheat, paddy, maize, cotton and Sugarcane are usually placed after one of these legumes in the rotation. *Berseem and lucerne (clovers) have already* attained, the world fame as their cultivation has revolutionized the crop and animal husbandry in the U. S. A., Egypt, Canada, Australia, Italy, Spain etc. In India too it has been proved beyond doubt that growing of berseem (Egyptian clover) once in 2 to 3 years is most desirable for increasing the productivity of land. Other legumes like guara, gram, cowpeas, moong, moth, urid are multipurpose legumes because they can be grown as a grain or a fodder crop and can as well be turned into soil as a green manure. Guara, gram and moth require hardly any irrigations and can be grown in arid and semi-arid areas with good results.

In Punjab, maize and cotton thrive best after gram, berseem or Senji or guara. Wheat gives good yields after pulses, cowpeas and guara.

3. **Green manuring :—**

Whenever the Soil indicates signs of depletion, a suitable legume crop should be grown for burying as a green manure. To secure a luxuriant growth it is advisable to apply nitrogenous fertilizers as well as phosphatic fertilizer to the green manure crops. Through green manuring complete plant-food nutrients are added to the soil and this organic matter on becoming a part and parcel of the soil improves its mellowness as well as its capacity to hold moisture and nutrients. It activates the micro-biological population and improves the soil reaction. Sunhemp, Dhaincha and guara are popular green-manure crops for the varying conditions of soil, climate and crops. Though green manuring is always beneficial, it is now considered desirable to assess its full economic justifications before actually ploughing a crop into the soil. Experimental results often show negligible differences in yields of wheat and cotton raised after guara green manure and guara grain crop. This is due to the fact that in the grain crop of guara and gram practically whole of the foliage is shed and returned to the soil. This shows why cotton gives high yields when grown after gram or guara. Some crops like paddy and potato, however, respond best to green manuring because their nutrient

requirements are not limited to nitrogen or P_2O_5 alone.

It needs no further emphasis that under intensive cropping scheme, green manuring should be repeated after every 3 to 4 years of interval or after each cycle of crop rotation so as to maintain a soil in good heart. When and what to green manure is now becoming a matter of careful study, specific nutrients are being applied to the green manure crops for being subsequently available to the succeeding cash crop.

Advanced farmers are successfully utilizing all sorts of vegetative matter like weeds-growth, green stubbles, sod, and even loppings of hedge crops for turning into soil as a green manure. Cowpeas can be buried green at any time between July and October. A good cowpeas crop can be turned in as green manure after picking the ripe pods for seed. Its decomposition is quick enough to permit late sowings of Wheat and Oats. In short, the farmer should personally be on look out to utilize and return to his soil every sort of organic and green matter which would otherwise be of no economic value to him.

4. Use of fertilizers and manures :—

The importance of composting and maximum use of well decomposed organic manures cannot be over-emphasised, but in the modern agriculture the bulky manures alone cannot meet the full requirements of an intensive cropping scheme. Effective use of chemical fertilizers, complete mixtures and micro-nutrient supplies is perhaps the most dependable method of boosting the crop yields. Extensive research has been made and is still in progress to formulate suitable composition of fertilizers in supplementation with the organic manures for specific crops, soils and climatic conditions. Appropriate methods and proper time of application of fertilizers are also being investigated so as to reduce the costs. In the intensive cropping practice sooner or later the necessity of applying moderate doses of chemical manures becomes inevitable, because the nutrients removed by the crops in quick succession must be compensated with direct supplies till the slow natural process of mineralisation in the soil gathers momentum. As a general rule nitrogen may prove advantageous when applied in two partial doses, one at the initial stage of crop growth or at the time of sowing so as to stimulate the germination and growth, and second before flowering with a view to induce fullsome fruition of the crops. But in case of short season crops and also for those in which nitrogen application at late stage may result into adverse effects like delayed maturity and an inducement to excessive vegetative growth at the expense of restricted ripening or fruiting, it is always safer to apply full dose at earlier stages of growth. As fertilizers are costly materials they should not be applied in doses higher than the optimum. Wheat, Oats and barley do not generally require higher than 20 lb./N/acre but Sorghums cotton and Maize may respond to 40 to 60 lb./ N/acre. Sugarcane responds to still higher doses of nitrogen varying between 100 lbs and 200 lb of N/acres. For paddy also 60 to 150 lbs. of N/acre may be applied depending upon the soil conditions, but an application of potash @ 50 lb/acre of K_2O in addition to N is considered desirable for most of the areas. In fact, crops differ a great deal in their responses to fertilizers. Potatoes and Tomatoes usually yield best results when balanced mixtures of NPK are applied, this is why green manuring proves very beneficial for potatoes. An optimum dose for potatoes would be about 80:80:40 to 120:80:40 of NPK mixture, acre. Similarly legumes

in general and berseem in particular are remarkable for their high response to phosphatic fertilizers which may be applied at the time of sowing. In some areas P_2O_5 may be supplemented with a high dose of N for berseem with advantage. Nevertheless a farmer must not use fertilizers indiscriminately, as it may prove not only uneconomical but also harmful to some crops. Moderation is the golden rule in the use of fertilizers. It cannot be overstressed that to stabilize the crop yields at a high level generous use of compost, well rotten F. Y. M. and green manures is desirable, because it keeps the status of soil fertility on the up-grade.

5. Use of crop mixtures and leys:—

For maintaining soil in good heart and to maximize yields it is often beneficial to grow non-legumes in mixture with legumes, particularly for green fodder. Chari-Guara, Jowar-Cowpeas, Maize--cowpeas and Jowar-Moong Mixtures are popular for high yields of nutritious forage. For enhancing yields from the first cutting in berseem, rapeseed may be broadcast mixed with berseem. Under barani conditions grain-crop mixtures like wheat-Gram, Gram-barley, wheat-gram-barley, Wheat-Sarson, Moth-bajra, Jowar-urid, Jowar-moong and Maize-urid are popular. When dairying constitutes an important part of the farm business, it is profitable to put some acreage under grass-legume mixtures as leys for 2-3 years. Ley farming when practised systematically greatly improves the fertility of land and the cash crops, which succeed the ley, give very high yields. Rhodes grass-Lucerne lay has been found successful at some of the farms in India. The best way to revitalize soil is to turn in the sod after a two to three years ley and leave it fallow for one season preferably in summer.

6. Economic use of irrigation facilities is very important because available water supply which is the main stay of a crop's success, has to be used to its fullest capacity for raising as many crops as possible. Apart from checking the losses in the channels and fields, it is necessary to plan areas under different crops in such a way that the total supply can meet the requirements adequately. Larger area may be devoted to crops which require fewer irrigations to mature. The winter rains generally being scanty and uncertain, a very careful planning is required while assigning acreage to rabi crops. Gram, barley and metha usually require no irrigation after sowing unless the winter rains are too scanty. Wheat, oats, linseed, rape and Senji require at least one to two irrigations. So large areas should be put under the aforesaid crops, but crops like berseem, Potatoes and sugarcane can be assigned only smaller areas especially when the water supplies are feared to fall short of requirements. Early Kharif crops also require good water-supply facilities till the break of monsoons on which depend the major sowings of Kharif. For the sowings of rabi crops it has been found very convenient to make use of the last irrigation given to the previous crop (Vadh Vattar) to prepare the seed bed and to ensure timely sowings.

7. Cultural or Cultivation Practices :—

When crops are raised in quick succession far greater efficiency in the use of implements and labour is necessary for performing the various operations in time. To realize high yields of course, the sowings, hoeings, weeding, earthening up, harvesting and the like operations should be conducted at the optimum time. The crop should be removed as soon as it is ripe and a furrow turning plough should be worked immediately after harvest. In case of

paddy, cotton and green fodders the last irrigation given before harvesting can serve to work the plough. Good farmers often use this Vattar for preparing seed bed to make sowings of next rabi crop or a catch crop. Gram, Senji and metha after cotton; berseem after paddy; and wheat after guara for grain are the cases in point. A fine seed bed is all the more desirable when the cropping intensity is high. Line sowing of crops gives additional advantage of a uniform germination and permits use of bullock labour for the purpose of subsequent hoeings and weeding. In line-sown cotton, Senji can be sown in between the lines even before the cotton is removed. In potatoes the fertilizers top dressed at the time of planting can prove more efficient than the band-placed nutrients if the first earthing-up is done efficiently and before applying the first irrigation. It is commonly observed that a delay of a few days in the harvest or picking of the crops in general frequently result into a heavy shedding of ripe pods, ears and seed-cotton, thus the very purpose of the crop is defeated. The time factor is also very important for sowings, because too early or too late sowings fail to yield satisfactory results.

8. **Mixed Farming :—**

In the suburban areas and vicinity of towns where vegetables, fodders, sugar-cane and some of the directly saleable grain crops find a ready market, the farmer may or may not take up mixed farming, but in the rural areas it is desirable to raise livestock for dairying, draft or other purposes along with the crop husbandry, if the full benefits of the intensive farming have to be realised. This endows complementary benefits by ensuring a productive use of fodders, feeds, hays, grain and dry stalks and other products while the livestock contributes not only towards fertility of land through cheap production of compost and F. Y. M. but also brings uniform cash returns through the sale of animal products.

9. Efficient plant protection measures and effective weed control are of course essential for the success of any system of farming. It is understood that an advanced farmer would not only use improved seeds free from diseases and pernicious weeds, but would also take timely measures and precautions to control pests and diseases. Every good farmer must have an equipment of good sprayer, dusting machines as well as insecticides and fungicides ready at hand. Weeds like 'baroo' (Sorghum halpens) Motha, Dub. Dabh, Kans, Piazi, Pohli etc. need constant attention of the farmer.

10. To sum up it can be said that a modern farmer should take up farming just like a business project, he should not only plan, organize, and economise but also he has to be a wise opportunist. The trends of markets and the emerging demands of agricultural commodities and products should be carefully studied and foreseen, risks should be properly covered through diversification of the business and the whole farming system should be solidly based on a foundation of improving soil fertility, a high standard of livestock and increasing returns per acre and per unit of investment. Fullest employment of land, labour and capital all along the year should be the objective. Use of labour saving devices and handy machines for monotonous jobs, may be encouraged. Depending upon the natural conditions and demand, a farmer must specialize his farming system for producing farm products and commodities of reputable types. This is the road to a higher standard of living and production.

SOME THOUGHTS ON MECHANIZATION

By : A. N. SHARMA

Introduction :—

IN this age when everything is going to be industrialized people are intending to run agriculture on the same principles by which the other industries are governed. And for this, this profession (Agriculture) is also going to be revolutionized by "Mechanization". Our motto now-a-days is to produce or to grow a thing at the minimum cost without seeing other aspects. In agriculture it is the cost of labour which matters much (40-50%). Therefore, if we want to reduce this cost we will have to curtail the labour force and this can only be done by the process of mechanization. Mechanization therefore means "displacement of labour by capital". In this paper we are not concerned with the definition or merits or demerits of mechanization but we will limit ourselves only to social aspect of it.

Social aspect :—

The farmers generally seem to think that the only method by which they can effect economies in their own and the national interest is to put men out of work. Because he knows too well that wages constitute 40 to 50% of the total farm outgoings and he seeks to dispense with every man he feels he can do without. If the level of production is maintained with fewer people, he will keep less labourers.

On the other hand it may well be that the workers are voluntarily leaving the industry because they may get better jobs in other industry. If this is so then there is a fresh "drift from the land". In critical periods (March-May) when the labourers are badly needed and suppose there is no labour supply, what will happen ? The first thing will be that the operations will be delayed which will consequently mean the fall in production and ultimately increase in imports.

1. *Basic Problem* :—Primarily mechanized farming is meant for the new countries where the labour supply is scarce. But for we, in India, where labour is cheap and abundant the basic problem is of unemployment. It will be foolish to argue for mechanization because by it we will intensify this problem. When a man is dismissed either from industry or from agriculture he immediately goes from door to door in search of work and if for a long time he does not find any work he soon joins the class "Won't-work's. And this increases crime and anti-social work which is highly undesirable in this age.

2. *Trends of Production* :—All the wages are governed by the output. And unless the production is not increased farmers will not pay more to the labourers. Now the question arises are we getting more by the tractor farming or by the other mechines. If not then it is useless to go in for mechanization.

The following table will answer these questions :—

Table No. 1.

Productivity of agricultural population by countries and for the world pre-war and 1947/48.

Continent	Yield per hectare (metric tons) Prewar	47-48	1947-48 percent of prewar.	Yield per person in agriculture Prewar	47-48	1947-48, Percent of prewar
World average	1.24	1.30	105	0.42	0.42	100
North Central America	1.07	1.50	140	1.82	2.57	143
South America	1.28	1.39	109	0.58	0.48	83
Europe	1.51	1.34	89	1.04	0.88	·85
Oceania	1.06	1.20	113	1.94	2.38	123
Asia	1.26	1.20	95	0.24	0.22	92
Africa	0.77	0.73	95	0.12	0.12	100

The productivity of agricultural production is constant for the world average and it has gone down in Europe, Asia and Africa, when we compared per-war days with 1947-48. "This view is further confirmed when we are told by Mr. Ashby and Mr. Sturrock that after making due allowances for changes, our real output per man has not substantially increased since 1939. What has all our investment in mechanization achieved"[2]? An adjustment in farming is undoubtedly called for, but if with all this mechanization, we cannot achieve what we have set out to do, we are achieving nothing.

The above table is for the world but when we look at our economy the same thing is again concluded.

Production per acre in India (Mil. Ton annual)[3]

Table II

S. No.	Year	Wheat Annual	Wheat 5 yearly moving average	Rice Annual	Rice 5 yearly moving average
1.	1911-12	.34	–	.42	—
2.	1912-13	.34	–	.37	—
3.	1913-14	.31	.334	.37	.382
4.	1914-15	.38	.332	.34	.384
5.	1915-16	.30	.328	.41	.358
6.	1916-17	.33	.332	.43	.384
7.	1917-18	.32	.328	.44	.398
8.	1918-19	.33	.320	.30	.384
9.	1919-20	.36	.330	.41	.378
10.	1920-21	.27	.332	.34	.372
11.	1921-22	.37	.330	.40	.382
12.	1922-23	.33	.316	.41	.374
13.	1923-24	.32	.320	.35	.380
14.	1924-25	.29	.398	.37	.372
15.	1925-26	.30	.294	.37	.366
16.	1926-27	.30	.288	.36	.366
17.	1927-28	.26	.302	.35	.368
18.	1928-29	.29	.304	.38	.372
19.	1929-30	.36	.300	.38	.380
20.	1930-31	.31	.308	.39	.384
21.	1931-32	.28	.304	.40	.380
22.	1932-33	.30	.292	.37	.378
23.	1933-34	.27	.290	.36	.366
24.	1934-35	.30	.296	.37	.362

1. Land Reform P. 4. U. N. Publication Department of Economic Affairs.
2. Food, Farming and the future by friend Sykes P.190. Fabre and Fabre publication.
3. The Food Problem, P 18 D. S. Chauhan Institute of Social Sciences Bulletin No. I

S, No.	Year	Wheat Annual	Wheat 5 yearly moving avarage	Rice Annual	Rice 5 yearly moving avarage
25.	1935–36	.30	.300	.33	.362
26.	1936–37	.31	.302	.38	.358
27.	1937–38	.32	.304	.37	.354
28.	1938–39	.28	.300	.34	.350
29.	1939–40	.31	.296	.35	.342
30.	1940–41	.28	.294	.31	.334
31.	1941–42	.29	.294	.34	.342
82.	1942–43	.31	.290	.33	.340
33.	1943–44	.28	.284	.38	.344
34.	1944–45	.29	.264	.34	.342
35.	1945–46	.25	.254	.33	.346
36.	1946–47	.19	.248	.33	.334
37.	1947–48	.26	.242	.32	.326
38.	1248–49	.25	.244	.31	.312
39.	1949–50	.26	.256	.30	.302
40.	1950–51	.26	.264	.26	.298
41.	1951–52	.25	.272	.28	.306
42.	1952–53	.30	.282	.30	.310
43.	1953–54	.29	.286	.35	.324
44.	1954–55	.31	.270	.32	.330
45.	1955–56	.28	—	.33	—
46.	1956–57	.27	—	.35	—

The production of wheat in India in 1915–16 was 0.38 mil. tons whereas in 1956–57 it was 0.27 mil. tons. Similar is the case with rice also the figure 0.42 mil. ton could not be surpassed even in 1951–52 when the imports of tractors and parts was worth value of 7.8 crore rupees.[4] This shows that the average productivity of the land in our country is declining. This should be taken as a signal slowly coming of dangers.

3. *Manurial problem* :—Besides, mechanization not only displaces human labour but also cattle labour. As all the agricultural operations are done mechanically and very little or no necessity is felt for the bullocks. It is also a fact that organic manures or F. Y. M. are the best manures as they have binding capacity of soil particles. But when cattle force will be displaced by these machines, from where this manure (Cowdung or farm yard manure) will come. For it either we should depend on green manuring or on cakes or on chemical fertilizers. If we introduce

[4] Year (March to April	Value in Crore rupees
1948–49	1.9
1949–50	5.0
1950–51	5.2
1951–52	7.8
1952–53	3.4
1953–54	3.7
1954–55	3.9
1955–56	4.0

Source

Indian Agriculture in Brief P. 75 (table No. 12.6)
Ministry of Agriculture Govt, of India.

green manuring then generally we can take only one crop in a year and for the other two (Cakes and fertilizers) we will have to spend money on them and inspite of it the worst thing is that they leave residual effects (if we add sodium nitrate to the soil when it comes in contact with water, sodium salts are formed which are insoluble in water and so unavailable to the plants and it also increases alkalinity to soil. If it becomes too much in the soil then nothing can be grown in it). The binding capacity of the soil is loosened and the erosion will start. This thing is reported in many mechanically advanced countries and they are now again coming back towards horse ploughing.

Other Aspect ;—It is all from the agricultural point of view but even from war point of view mechanization is not at all desirable, the unforgetable example is war between N. Korea and S. Korea when China and America were on either side. Americans were far better in mechanical equipment especially in the form of aeroplanes. Americans could flood the Korean land with bombs and mechines but the Koreans had infantry to spare. This war was a boon for the Koreans and Chines whereas Americans suffered heavy losses especially in human life.

Conclusion :—Mechanization has become so much popular that it is recommended for every aspect of our agriculture. It is just like pencillin injections in medical profession. If we have fever, pain or infection, the doctor will at once prescribe an injection of pencillin without seeing other things. The adverse effects of it were recently seen at kanpur. We do not mean that mechanized farming or tractor ploughing is bad and we should discard it. But we should follow it only after seeing conditions of the soil and also of the nation.

In an over-populated country where the foremost problem is of unemployment and the country is suffering from many other problems (economic as well as social) it must not be followed. From every consideration manpower is and always will be the greatest consideration. Why create an economic structure which will destroy this basic material out of which the fabric of life is built? What need indeed is there to farm if there are no people to feed? or to have factory to make clothing if there are no subjects to clothe ? A serious overhaul of our elementary economic structure is long overdue and the people who matter ought to address their attention to these basic and elementary features of our life without further loss of time.

CHEMICAL WEED CONTROL

By : B. S. SHARMA

CHEMICAL weed control is one of the most important phases of the modern era of 'Chemicalized Agriculture'. Chemicals which are known as herbicides, weedicides or weed-killers, when sprayed, are apparently absorbed by leaves, stems or roots; they upset some vital plant processes and finally result in the death of the plant.

Chemical weed-killers currently in use, fall into two major groups : (i) selective weed-killers which kill weeds without harming the crops in which they are growing ; and (ii) non-selective, which kill all vegetation in the treated area.

Selective Weed-killers

Weedicides with the selective action naturally have the greatest appeal because they can be used to supress weeds growing in the crops. The selective herbicides are further divided into two groups: systemic and contact weed-killers.

Of the systemic group of herbicides. the substance that have proved most effective are derivatives of phenoxy acetic acid. Of these 2 : 4-D (2 : 4-dichlorophenoxy acetic acid), MCPA 2-methyl -4-chlorophenoxy acetic acid), and 2 : 4 : 5 - T (2 : 4 : 5 - tri chlorophenoxy acetic acid) have been used most extensively. These herbicides are also known as growth-regulators, or hormone weed-killers. All these are non-poisonous, non-corrosive, relatively cheap and easy to apply. Their selective action is not fully understood. The chemical after entry into the living cells, causes serious physiological disturbance, not only locally but in parts far removed from the point of application. Growth is arrested, the stem and leaves become twisted and contorted and the stem thickens and often splits. The foliage changes colour and finally the plant dies. The process is relatively slow and the plant may not die till two or three weeks after treatment. However, different species of plants do not all show the same degree of susceptiblity to the hormone weed-killers. Cereals and grasses for example, are more resistant to a certain extent than broad-leaved plants in the case of 2 : 4-D and MCPA; while 2 : 4 : 5-T has shown marked superiority in its action on woody plants.

In cereals, the nature and thickness of the waxy coating (cuticle) on the body of the plant and the formulation of chemicals are the main factors that account for their selective action. Thus, esters (formed from an alcohol and an acid) dissolved in oil and emulsified in the spray solution may enter the plant more rapidly than salt formulations. Cereals are, therefore, found to be more easily injured by ester of 2 : 4-D than its sodium salt. The relative effectiveness of different derivatives is also altered by the age of the plant. For example, it has been observed that esters and salts are essentially equally effective at the seedling stage, but as the plant becomes older the esters become more and more effective in comparision to the salts (Lee and Bewick 1947). This is consistant with the generalizations made by Crafts (1948) that lipoidal or nonpolar materials enter the plant more readily when the cuticle layers themselves are primarily made-up of lipoidal and nonpolar materials.

The recent discoveries by Prof. Wain (1954) at Wye College, England brought out a new set of phenoxy butyric compounds known as MCPB, 2:4-DB and 2:4:5-TB which, though chemically derivatives of the much used 2:4-D, MCP A and 2:4:5-T, have an unique mode of selective action. Their selectivity is, at least in part, dependent on the ability of susceptible weeds to convert a harmless chemical into lethal herbicides depending on the presence of specific enzymes which convert the nontoxic butyric molecule into corresponding toxic acetic acid herbicides, e. g. MCPB→MCPA or 2:4-DB→2:4-D. These butyric compounds have shown their promise for controlling broad-leaved weeds in clovers and certain varieties of peas.

Contact Weed-killers

The second group of selective weed-killers act as a contact poisons and produce severe injury to the plant tissues. The chemicals, included in this groups, are DNC (Dinitro-ortho-cresol) DNOSBP (Dinitro-ortho-secondary butyl phenol) and sulphuric acid. The dinitro

compounds are only partially contact poisons in action whereas sulphuric acid is indiscriminately contact weed-killer. Their selectivity depends more on morphological differences. Cereals and grasses have tall, erect, waxy leaves and a protected growing point, whereas in many weed seedlings the leaves are flat and horizontal and the growing point is exposed. When they are sprayed on to cereals and grasses they do not get wetted and, therefore, suffer little damage. The broad-leaved weeds, such as *Chenopodium album* and *C. murale* etc., on the other hand, retain the spray and are fully exposed to the action of the weed-killers. They are, therefore, killed.

Herbicides are also used after the crop is planted but before it emerges, as the pre-emergence treatment. The chemicals used for this purpose are Amino triazol, IPC (Isopropyle N-phenyl carbamate), TCA (Trichloro acetic acid) and Dalapon (2 : 2-dichloro propionic acid) etc. Here weed control depends considerably upon positional selectivity. The bulk of the weed seeds are found in the top soil layers and the crop seeds are generally sown at lower level. Thus, the weedicides which are applied to the surface of the soil are in closer proximity to the seminal roots of the weeds than those of the crop plants lower below and, therefore, affect the former with practically no injury to the main crop plants. The efficiency of kill of a weedicides differs with the kind of the weed. The latter have, therefore, a specific concentration requirements of the weedicide for a desirable degree of kill. The effectiveness of such weedicides is subject to many variables of which rainfall, soil type and crop variety are uppermost in importance. Rough and cloddy land cannot be safely treated. Beds or ridges also present difficulties.

Non-selective weed-killers

Non-seletive herbicides are also known as 'General Weed-killers' applied either to the foliage or to the soil that kill all the growth regardless of the species of the plants. While some of them have been under use for over a period of several years, others are comparatively new. These include: sodium chloride, sodium chlorate, sodium arsenite, sodium hydroxide, sodium borate and many others. For many years these chemicals have been applied as the general contact spray in Western Countries and find use in a variety of situations where no growth is wanted e. g.: roadside and ditch-bank. etc.; but at present they are not generally recommended because many of them are extremely dangerous to both human beings and animals and sterilise the soil for relatively longer period of time.

Several new chemicals of the phenol compounds and others have been recently introduced. They are extremely toxic to plants and are now being used in place of weedicides just mentioned above. Among them are penta-chloro-phenol, dinitro-cresol, dinitro-secondary-butyl phenol, amyl phenol, CMU (3-para-chloro phenyl-1 : 1-dimethyl urea) etc. Most of these compounds are sold under trade names. The active ingradient in such commercial products is shown on the labels as also the necessary information in respect to dose, time and the crop to be treated. Examples of these products are Sinox General and Karmex W. These chemicals, although essentially non-selective, are used at low rates as pre-emergence weed-killers in certain crops. When used in growing crops the chemical is prevented from coming in contact with crop plants by proper placement of spray. In crop like corn, sugarcane and cotton the base of

the plants are woody or are protected by old leaf bases that shield the living tissues from the spray. These chemicals at heavier rates act as temporary soil sterilants but their effects do not remain for a longer period as in the case with the use of chemicals which are used to control vegetation in non-agricultural land or for soil sterilization.

It may, however, be indicated that the herbicides that will kill all weeds and spare all economic plants have not yet been found. Their selectivity is dependent on the correct application techniques. If too high a dose is used or the spray is applied at the wrong time or a wrong formulation is used, the crop may be severly damaged.

POST--WAR PRICE TRENDS IN INDIA

By: M. A. OOMMEN

IN a money economy prices act as a fulcrum on which the economic mechanism revolves. They serve as a lever which helps to lift or depress the whole mechanism. Even in a planned economy, price plays a vital part in the allocation of resources and the achievement of targets.

Post-war years 1945–51.

The War ended in August 1945. The cessation of war had no effect on the war time inflationary trend. From September 1945 till April 1951, we find an inflationary rise in prices. During this period, the Economic Adviser's General Index of wholesale prices gained 213.4 points as against 144.1 points in the entire war period. Various factors have conspired to push up prices since 1945. Anticipating deflationary tendencies, the Budget of the first two years was inflationary. A greater incentive was given for capital investment. Excess Profit Tax was abolished. Several concessions were given for income-tax. Import duties on raw materials were abolished. Another reason for the inflationary trend was the pent up demand for consumption and reconstruction which asserted itself with the relaxation of control during this time.

This up-trend which gathered momentum towards the close of 1947 after the partition of the country continued till July 1948 when, as a result of the re-imposition of controls, the rapid rise in price level was held down and prices were maintained at a stable level for 14 months. But the stable price took a mild upturn following the devaluation of September 1949. The general index rose from 389.0 at August 1949 to 393.3 by the end of October–a rise of 4.3 points or 1% only. In March 1950 the general index was only 0.9% above the pre-devaluation level. The expected rise in prices did not assert itself fully largely due to the Eight-Point programme of the Government aimed at 'holding the price line'. But the efforts of the Government proved ineffective when the Korean War broke out. The outbreak of the War gave rise to a sudden spurt of speculation and hoarding. The speady deterioration in the international situation and the shortages of essential goods resulting from stock-piling, coupled with heavy outlays in most of the leading countries in rearmament programmes generated boom conditions and fresh inflationary forces. Within a month of the outbreak of the Korean war i.e. by July 1950 the general index rose from 395.6 to 405.2 or a rise of 10 points. The rise continued till it

touched a peak of 457.5 in April 1951. One more contributory cause of this inflationary trend may be mentioned. Against an increase in the supply of money and the purchasing power of the people, the output of goods, both agricultual and industrial declined.

Efforts to control prices were taken only from the last quarter of 1948. Apart from steps taken to control the prices of particular items, such as reimposition of the control on cloth and the cut and control on the prices of food grains, Pig-iron and steel, the fixation of the price of sugar and the downward revision of cloth prices, the government scheme involved such varied measures as encouragement to production, liberalisation of imports and restriction of exports, curtailment of purchasing power by intensifying the small savings campaign and by limiting the dividends of companies, check on speculation through the prohibition of futures trading in commodities, and reduction in government expenditure with a view to ensuring balanced budgets.

Post-war inflation—Price inflation

Inflation is generally understood to be "too much money chasing too few goods". As distinct from this 'money inflation', Prof : Paul Einzig refers to what he calls 'Price Inflation'. He defines inflation as "a disequilibrium in which an expansion of purchasing power tends to cause or is the effect of an increase of the price level". This interpretation brings within the scope of the term inflation not only that familiar phenomenon of too much money chasing too few goods, but also the vicious aspect of the problem of a wage, cost of production and price spiral in which each becomes at the same time the cause and effect.

We have seen that the post-war period witnessed an almost continuous rise in prices. Though different causes contributed for the rise during the different stages of the period, the existence of inflation, throughout the post-war years, is an undisputed fact. It was a sort of 'Price inflation' in as much as prices were feeding upon themselves. It may have been due to the activisation of the latent forces of inflation generated during the War or the opening of the gates of the onrushing tide of rising prices kept in check by the device of price control or the sudden boom in prices caused by the Korean War, coming in the wake of devaluation. In each case, however, money supply instead of being a cause for rise in price, has only adjusted itself to the monetary requirements of the changed level of prices. When prices rose money supply also rose to fulfil the increased monetary requirements consequent on the rise in prices. The monetary phenomenon did not cause a change in price level, it was occasioned by it. Infact money supply during this period increased by Rs. 106 crores. Surely this increase in money supply could not have caused the price level to soar so high. In short the post-war inflation seems to be a vicious spiral in which money, prices, wages, cost of living, cost of production have chased each other in the up-ward direction.

The distinction between monetary inflation and inflation resulting from other factors that initially raise the price level, which in its turn sets into motion the inflationary spiral, is of importance, for the remedies for these two situations are some what different. In the first case the main emphasis is to reduce the amount of effective purchasing power available to the people through additional taxation, larger borrowings, price controls, rationing etc. In the other case the attack must be on the price front itself. The factors caus-

ing the initial rise in prices are to be first tackled. If they have had their effect the next important step is to prevent this rise from feeding upon itself and affecting the cost of living and cost of production. Cost of production and cost of living must be kept down through appropriate measures and controls if necessary. At a later stage monetary controls, along with fiscal action may become necessary. Thus although the recognised remedies for inflation are the same, yet the emphasis necessitates different action. The disease must be diagnosed properly before remedies are administered.

The Recession 1951-52

The year 1951 is important in the history of prices in India in recent times in so far as it witnessed for the first time since 1940 a major reversal of the general uptrend in prices. From the maximum level of 457.5 in April 1951 the Economic Adviser's General Index declined to 430.3 in January 1952 and came down to 377.5 in March 1952. Over the year 1951-52 the general price level showed a decline of 15.9% as against a rise of 15% duing 1950-51. The causes of this may be summarised as follows: (1) Increase in agricultural and industrial production. (2) Liberalisation of imports. (3) High export duties discouraging exports. (4) Over-stocking of certain commodities during the Korean flare-up produced a natural reaction when the expanded stocks of raw materials could not be absorbed by industry and a decline in demand followed. (5) Korean peace move in mid -1951, the stretching out of the rearmament programme in the U. S. A. and the revision of the stock-piling practice in that country produced deflationery conditions in the world's commodity markets. (5) Reduction in money supply. As against an increase of Rs. 99 crores in 1950-51, the money supply during 1951-52 declined by Rs. 172 crores. The Bank rate too was increased from 3 to 3½ percent, thus tightening the credit structure.

Apparently the fall in prices seemed to be a gain for the consumers. Really it was not, as the cost of living index did not fall appreciably. The recession affected mostly export articles. While the consumers did not benefit much, producers were hard hit. In a period of 2 months the Jute trade lost over Rs. 50 crores, cotton about Rs. 21 crores, besides huge amounts in bullion, oil seeds, sugar, spices and chemicals. Some silk concerns were closed down. The pessimism of business men led to further depression; Government realised the seriousness. Some measures such as encouragement of export, easier credit facilities etc. taken by the government helped to arrest the decline in prices. By the end of June 1952 the general index of prices had risen to 381, a rise of over 4% compared with the lowest level touched during March 1952.

Price trend during the First Five-Year Plan.

During the period March 1952 to March 1953 prices rose by 2%. Even this rise was not general. During 1953-54 too, prices remained fairly steady although they registered a rise of 2.3% over that in March 1953. The general index at the end of March 1954 was 394 as against 385.2 in March 1953 and 377.5 in March 1952. Broadly speaking during these years the price level remained fairly steady and prices remained stabilised around the level reached at the end of March 1952. During the next year the stability was disturbed and there was a sharp recession in prices. The fall in prices of food articles (20%) was the highest and the most marked. The trend was reversed from June 1955 onwards. Despite the increase in the price level at

the end of the First Five-Year Plan (March 31,1956) it was 13% below the level at the beginning of the plan.

The pre-plan quinquennium was a period of inflation. So the price policy of the First Plan was designed to control inflation. In fact, as we have seen, not only was inflation controlled, a downfall of prices followed. These were several favourable factors. During the period agricultural and industrial production have vastly improved owing to climatic factors and also due to the progress made in the development schemes of the government. The easing of the supply position has naturally exerted a downward pressure on prices. Price control of essential commodities, raising of the bank-rate, the substantial revenue surplus in 1951-52—all these forces of the early years of the plan might have helped to control inflation.

The down-swing of prices was to be controlled before it becomes a depression. The policy of progressive de-control was adopted as a means of counteracting down-trend in prices. In addition to this, the following measures also were taken by the Government to maintain Price stability during the First Five-Year Plan. (a) regulating exports and imports with a view to adjusting supply to demand. (b) price adjustment upward and downward in relation to supply and demand conditions. (c) the policy of price support with a view to stabilising agricultural prices.

Since India is primarily an agricultural country, the prices of agricultural commodities enter predominantly into the price index. Even among agricultural commodities, food crops account for 80% of the area under cultivation. The stability of food prices is therefore of fundamental importance to general price and economic stability.

Deficit Financing and the First Plan

Prepared in the context of an inflationary situation, the First Plan envisaged deficit financing only to the tune of Rs. 290 crores, a figure which equalled the estimated release from India's sterling balances during 1951-56. But in order to cover the uncovered gap and also to make good the short falls in certain items of expected finance, deficit financing of the order of Rs. 443.5 crores was undertaken during the First plan. In fact they could have undertaken a higher order of deficit financing, because the price level was either stable or recessionary. While money supply in 1954-55 increased by nearly 7% the level of wholesale prices actually fell by some 5%. This would indicate that monetary expansion was in accordance with the requirements of a growing economy. As the marginal propensity to consume is high and as the time lag required for investment to fructify is greater deficit financing in India is bound to be inflationary and they have to be adjusted according to the growing needs of the economy. Encouraged by the price behaviour of the first Plan, the Planning Commission have put in Rs 1200 crores of deficit financing during the Second Five-Year Plan. Experiences of the first three years of the Second Plan have shown that the economy has not expanded enough to absorb the excessive purchasing power, thus released.

Price trend and Price Policy of the Second Plan:—From May 1955 the general price index in India began steadily to rise. The general index number of wholesale prices (base August 1939 = 100) has risen from 342 in May 1955 to 428.8 in December 1956 and 435.9 in September 1957. But since then as the Reserve Bank Report points out, there was a continuous fall in prices till February 1958 and a rise again thereafter. The

index number of Wholesale Prices (Base 1952-53 = 100) was 115.0 in July 1958 and 116.7 by the end of October as compared with 106.0 in the beginning of the year. The index number of food grains was 119.6 in August 31, 1958 as against 102.5 in January last and 112.1 in August 1957. The high level of investment expenditures on public and private account accompanied by deficit financing and large scale credit expansion, has led to a general increase in the demand for food grains. As against Rs 343 crores in 1953-54 and Rs 476 crores in 1954-55 the plan investment went up sharply to Rs. 667 crores in 1955-56, then to Rs. 761 crores in 1956-57 and more than Rs. 900 crores in 1957-58. The money supply has gone up from Rs. 1,794 crores on March 31st 1954 to Rs. 2,240.2 crores in 31st August 1957. While purchasing power has thus increased, there has been no such increase in the supply of food grains. The slowing down of market arrivals, failure of crops in certain areas, reports of scarcity from chronically deficit areas leading to a bullish effect in prices etc. are other reasons of the recent rise in prices.

From the recent experiences, we can say that the Government had inadequately assessed the implications of economic development on the scale planned by them. The hasty dismantling of controls during the First Plan was an unnecessary step. When prices fell during 1953-55; the government even allowed exports of food grains. They failed to build up an adequate buffer stock by buying when prices fell. The usual vicious spiral of price inflation is in the offing and government must strain every nerve to keep it under control.

Though the available resources according to the estimates of the Planning Commission are only Rs. 42,20 crores, the National Development Council decided to retain the Size of the Plan at Rs. 4500 crores. This means that the size of deficit financing will have to be of a higher magnitude. With prices at the present level and with growing pressure for increases in wages and Salaries, it is necessary to avoid further deficit financing. Now that the sterling balances are practically depleted, that " Cushion " to offset the inflationary impact of deficit financing is no longer available. If the prices are brought down, a mild doze of deficit financing is desirable. But the problem is to bring down the prices. The recent food grains policy is a right step, if it can be handled properly. The control of wholesale trade will lead to procurement at one end and retail distribution at the other and rationing and black-marketing is likely to figure again. Further the trade in food grains cannot be separated from the trade in other agricultural products. As a matter of fact what is required in a developing economy with inflationary potential is increased production of foodgrains and other consumer goods. The superstitious reverence for steel and other heavy industries must go. A well planned open market operation may be able to control fluctuations in prices. A vigorous programme of small savings will help to bring down prices. The prize bond scheme put forward by the Madras Finance Minister is a bold scheme in the right direction to mobilise money from middle class and lower-income groups whose propensity to consume is greater with little or no propensity to save. If price rise is controlled even part "B" of the plan (Rs. 300 crores) which is put in the cold storage at present can be implemented. In fact holding the price line is maintaining the life line of the economy.

WHY KHADI FOR INDIAN YOUTH ?

By : Prof. J. S. UPPAL

SINCE the attainment of Independence, all the energies of the Government of India have been directed towards the development of cottage and small scale Industries and especially the Khadi and Handloom Industry on Socio-Economic grounds. Various steps have been taken by the Government sponsored Boards and Associations to popularise Khadi in our country. It has, however, been observed that the idea of Khadi has not caught the imagination of our youth and they still entertain many doubts about this cloth and hesitate to wear it. In this paper an effort has been made to dispel these doubts and to explain as to why Khadi is important for our youth.

The main argument in developing Khadi is the provision of employment opportunities to our fast growing population, composed of un-educated and technically untrained people. The unemployment problem in India has assumed serious proportions and the existence of this grave problem not only constitutes a threat to the economic stability of our country, but also it is a direct cause for our impoverishment. Due to the non-utilization of our man-power, the nation is devoid of huge amount of goods and services, which the unemployed and under-employed millions could produce.

The unemployment is a serious threat to the emotional equilibrium of an individual. It creates devil, it turns good man into a criminal. It encourages dishonesty, patronises corruption, glorifies falsehood, points out the dark side of human character and makes one blind to its good side. A half-clad and half-fed man is a diseased man and he infects the nation. The fire of hunger consumes all the virtues of a father, duties of a son or a husband. It is in the political sector that the problem has most serious consequences. The unemployed worker fills the ranks of dangerous element in the country, which aims at hitting at the various foundations of the society. They join such organisations, not because that they subscribe to their ideology but it is the resultant frustration which takes them to these directions. The problem of unemployment has to be solved and it can be done by developing either the large scale industries or small scale and cottage industries. True that the western nations like U.K., U.S.A., France and Germany have built their economic superstructure on the foundations of large factories but what is suitable for the western countries is not necessarily good for our country. In fact the suitable technique of production for consumer goods industries depends on the economic conditions obtaining in a country and its objectives for future. Our Economy is characterised by the lack of technical know-how, capital goods and money essential for large scale production. It becomes abundantly clear that our salvation lies in the development of cottage industries—the premier among them being the Khadi Industry. The experience gained in India from the expansion of large scale Industries since Independence demonstrates a dismal fact that the employment, instead of increasing, has actually decreased. The figures in the census of Manufactures in India (1952) reveal this sad tendency :—

Year	No of Registered Factories	Fixed Capital	Working Capital	Employment
1948	6144	Rs. 195.64 crore	Rs. 482.19 crore	17,04,230
1952	7155	Rs. 300,94 crore	Rs. 730.77 crore	16,48,443

The employment potentialities of Khadi and handloom industry can be judged from the fact that at present it provides jobs to 6 million people and the total production is 1543 million yards (1509 million yds handloom plus 34 million yds Khadi). If we could double the consumption of this cloth, it would enable 6 million more people to find work. It may be pointed out that at present only 5.3 million persons (2.5 million in urban areas plus 2.8 million in rural areas) are unemployed. In this way, Khadi and handloom industry can bring about full employment in our country. Is it difficult to double the consumption of Khadi? No certainly not! It just means one more shirt and one more payjama (of 3 Yds each) per head of our 216 million adult population. Cannot we make this much sarcrifice for our teeming millions, when we profess to be patriots? Let our patriotism and high ideals be transformed into action! The main burden of this task falls on the shoulders of our young men, who are the harbingers of economic security to our starving millions. The history of the world tells us that it is the youth, who give lead to the nation, as they are an important connecting link between the incoming and outgoing generations. A youngman, if he may use Khadi himself, can persuade his parents and younger children in the family and thus whole of the nation. In this way he can serve as a bread giver to the starving and down trodden workers. It may be stated here that Khadi is not supported here on account of any prejudice against the Cotton Textile cloth, as the latter is as much a national industry as the former. It is just a choice between the two techniques of production with reference to our economic conditions and objectives.

Besides these Socio-economic arguments, there are many other points that go to support Khadi as a suitable dress for our youth. Let us first of all find out the essentials of a cloth to be recommended for our young people. These essentials are :—

(i) Cleanliness
(ii) Washability
(iii) Elegance
(iv) Comfort
(v) Cheapness in price.

Let us now apply these tests to Khadi for determining its suitability or otherwise. Cleanliness is, perhaps, the most important aspect, as any cloth which will give the look of being dirty would be abhored by the people. The cleanliness of the spotless khadi is un-matched. Even the coloured khadi reflects cleanliness and there are many colours in Khadi namely grey, blue, chocolate etc., which preserve good look for quite a number of days. The young men, who have to undertake manual work in the factories etc. need that type of cloth, which would absorb dirt and oily substances, without giving ugly look. Khadi, fortunately contains this qualification. The quality of washability in a cloth is also very essential as if a cloth is not washable or which requires complex type of washing, it cannot be called as a good cloth. The cloth should be such as one may be able to wash it even at home as due to poverty in our country, most of the people do not utilize the services of dhobis. The washing of cloth involves two processes (i) washing with some chemical say soap or washing with soda or Sajji.

Ironing for crease :—In our country due to low economic standards most of the people do not use soap and common

mode of washing used is the boiling of cloth in water, mixed with soda or sajji. It is a common experience that the clothes woven by thin fibre do not stand the boiling and thus, they lose their durability. On account of this reason the fine textiles & silk clothes are not helpful. Khadi is very suitable for this purpose, as the fibre of the khadi being thick, it can be washed without any loss of durability even with soap or soda or sajji. In regard to the ironing of clothes we have to go after the following qualities in cloth :—

(i) Crease resisting quality

(ii) Whether the cloth gets wrinkles immediately after its use.

Silken clothes are at a disadvantage from both these points as they are neither crease resisting nor does the ironing last long. Such clothes, if to be used properly, must be ironed daily and it is an Irksome job besides being very costly. The textile cloth of fine texture only stands these two tests and the cheap varities of mill made cloth are not crease resisting. Khadi is crease resisting and the greatest merit in it is the existence of elasticity in thread that saves it from the wrinkles. An ironed shirt or pyjama made of Khadi can be used for 4–5 days even in summer, while the silken cloth and textiles will last say 2 and 3 days respectively.

Comfortable wearing is another essential of a good cloth. Comfort used in common language for a cloth implies its being warm in winter and cold in summer. For summer a good cloth is that which absorbs perspiration as otherwise one feels very much uncomfortable. The warmth of the Khadi in winter needs no emphasis. In a country like India, where our teeming millions are not able to purchase woolen sweaters, pull-overs or other warm clothes, due to acute poverty, it is the Khadi that serves a farmer, a cottage worker and a labourer from the biting cold. Textile cloth and silken clothes would not be able to preserve the requisite amount of heat and hence chances of exposure. True, that Khadi in summer is not as cold as the fine and thin qualities of textiles, but its quality as prespiration absorber makes it an excellent wear in summer also.

A good cloth must look elegant when worn, as the object of wearing cloth is not merely to cover one's body, but also it has cultural aspect and it reflects aesthetic sense. The greatest argument advanced against Khadi is that it looks coarse, it does not appeal to the aesthetic taste and one cannot wear it on festivals and days of rejoicings etc. Till recently, there was truth in this statement as without any State help the poor weavers were preparing crude patterns mostly for our peasantry, who go after cheapness and durability rather than elegance or beauty. Since Independence, however, the Govt. of India have been making strenuous efforts to improve the production techniques by teaching the weavers the art of mixing colours, printing in attractive colours, through numerous training centres and demonstration teams. The result is that the Khadi worker is now producing very attractive designs which have become the favourite wears for our young boys and girls. The collegiates in Khadi bushshirts in multi-coloured or plain or stripped designs look very up-to-date in fashion and the beauty of Khadi longshirts and attractive khadi sarees for girls is superb. The modern college girls prefer khadi prints to prints on linen or silk. Right from a child to an old man, everybody can purchase designs in khadi according to her or his taste. In the International

Industries fairs, the khadi prints have attracted the eyes of the foreigners and our Govt. is receiving quite a good demand for these prints from the foreign countries. Khadi, in this way, judged from elegance has proved to be very valuable.

The most important aspect of khadi, however, is the price factor as when the consumer is faced with the problem of choice between khadi and any other type of cloth, he would be mostly guided by their relative prices. In the past few years, khadi lost its position in the market as it was sold at comparatively higher prices. While a yard of textile cloth of medium quality could be purchased at Re. 1/- per yd, Khadi would cost between Re. 1/6 to Rs. 1/8. This price factor, would, sometimes eclipse the patriotic argument and khadi started to be used mostly as a wear for the workers of some political parties. If khadi is to be popularised, it must be made available to the consumers at competitive prices. This aspect of prices received serious attention of the Govt. Various policies have been adopted to bring down the cost of production of Khadi viz. supply of charkhas at manufactured cost, supply of raw materials at reasonable rates, provision of finance etc. The Govt. also levied a cess on mill made cloth for bringing the price of Khadi on competitive level. For further reduction in the price of khadi for the consumers the Govt. is now subsidising it from the State Exchequer. As a result of all these measures, Khadi is selling at comparatively cheaper rates and it is within the reach of common man. The prices of ready made garments of various types offered for sale at the various sale depots run by the officials & non-official organisations are amazingly low. For instance a Khadi bush-shirt of standard size would cost about Rs. 5/- to Rs. 6/- Deducting from it stiching charges @ Rs. 2/8 to Rs. 3/8, the price of the three yard of cloth comes to Rs. 2/8 to Rs. 3/-, (-/13/- to Re. 1/- per yd). Some critics doubt the wisdom in subsidizing the Khadi for boosting up its sale. They contend that ultimately the burden of subsidy falls on the already over-burdened tax payers. Why should then, the people bear the heavy cost? Their attention is invited to the fact that the major industries like iron & steel, sugar, cloth, cotton textiles have developed in India with protection and various benefits like support of people on political grounds, reduction in freight rates, supply of power at concessional rates etc. These benefits also cost the nation to the extent of crores of rupees. The question is very simple. If these large scale industries, which give employment to a few could be supported for such a long time and at huge cost to the public, why Khadi having vast employment potentialities cannot be supported. Judging from the various angles, use of Khadi seems to be for the benefit of our youngmen and women.

AGRICULTURAL CREDIT IN ASIA

By; M. N. NAIK

WITH the important exception of Japan, the countries of Asia are primarily agricultural. Between 60 to 80 p. c. of the people are dependent on agriculture, over 50 p. c. of national product is of agricultural origin and major portion of their exports is of agricultural commodities. The pressure of population on land is generally heavy; holdings are small and fragmanted and yields are low.

Agrarian structure

The main feature of agricultural structure in Asian countries can be pointed out to be, the small size and fragmentation of large proportion of agril. holdings. Many holdings have been reduced in size and are hardly large enough to provide bare subsistence and full employment to the family of the holder. The area sown per small cultivator may be estimated at about 3 acres. In Indonesia over 95% of the farmers in East Java have farms of one or two acres. The availability of cultivable land per agricultural household is about 2.2 acres in Japan and 2.5 acres in China.

The Second feature is that cultivation over major portion of lands is actually done by persons who have no proprietory or occupancy rights in the land. Before recent agrarian reforms, about half the land in Burma, China, India and Japan was worked by tenants. Then again, the rents charged to tenants are about 50 p.c. of the crop or more.

The need for credit

Owing to small size of their holding, the high rates of rents and the seasonal unemployment or under-employment, a large proportion of cultivators cannot manage to make their both ends meet. According to the All India Rural Credit Survey, 50 to 96 p. c. of the small cultivator families reported having borrowed in 1951-52, and 47% of the borrowings of cultivators, was for meeting family expenses. Thus the basic need of the small cultivator is probably for short-term credit, though he may occasionally need medium-term loans.

Sources of credit

By far the most significant feature of agricultural credit in Asia is the overwhelming importance of credit available from moneylenders,landlords and traders. Thus according to the All India Rural Credit Survey, over 93% of the loans had been from such persons. In Thailand 86 percent of the loans were from such persons in 1953. It should be noted that the institutional credit is available much less to the small cultivators because the Government and the Co-operatives attach much importance to land as security, and hardly advance loans for consumption needs apparently. Thus, in India, the average loan from co-operative per family amounted in 1951-52 to Rs. 21/- in case of large cultivators, Rs. 4.7 per medium cultivators and Rs. 1.9 per small cultivators. Thus the problem of Agril. credit is of inadequacy and unsuitability in Asia.

Terms of credit

The cultivators generally borrow on personal security, and on the implied understanding to sell the produce to the lender who is often a middle-man. In India, "the marketing of agricultural produce is largely in the hands of a body

of men, who as distinguished from the Government and the Co-operatives represent private interest and who control both the sources of credit and the disposal of produce." In Cambodia, Malaya and Indonesia also, the moneylender is also the unavoidable link between the cultivator and the market. It is only in Japan that this link is broken by co-operatives which handle 74 to 93 p.c. of food grains.

Linking of credit and marketing through the moneylender is, more expensive for the small farmer. The lender not only fixes the price but he is the judge of quality and owns the weights.

So far as rates of interest are concerned, it can be said that they are exhorbitant.

In Cambodia the interest rates very from 84% to 120% p. c. While in Indonesia they are 50 to 100 p.c. p.a. In India the proportion of money borrowed from private agencies at the rate of interest of 25 p. c. or more is in some areas as high as 70% and in certain areas the rates exceeding 50% are not uncommon. It is surprising to know that the rates of interest work out at 150 to 130 p. c. p. a. in Philipines. The percentage rates in case of Government loans are between 4 to 10 and in case of co-operatives between 6 to 12. The cumulative effect of exhorbitant rates of interest paid by cultivators, low price received from the sale of agricultural produce and various mal-practices of money lenders who are also traders, is that debts once contracted keep on accumulating.

Conclusion

Owing to the small size of the holdings, the high rates of rents, and low productivity of agriculture and similar factors many small farmers do not produce enough to meet their consumption needs. Indebtedness in these circumstances is inevitable.

The supply of institutional credit available to small farmers, is negligible. The co-operatives are weak. In many parts they have not reached all areas, and even where they cater to the credit needs of their members, they do not provide adequate part of their total requirements. In these circumstances, the small cultivator particularly the share cropper or tenant-at-will usually has to turn for credit to the moneylender, who charges exhorbitant rates of interest and frequently pays much lower price of the produce of the borrower that he purchases from him.

Recently there has been increasing awareness for integrated and comprehensive approach to the entire problem by the national Governments in order to implement their planned programmes of economic development. In India, the new approach is towards strengthening the co-operative structure by State partnership, and linking credit with marketing and processing so as to loosen the grip of private traders on the marketing of primary produce. In Philipines the new approach is typified by the Agricultural Credit & Co-operative Financing Administration. In Japan, the co-operative movement has been well developed and much progress is recorded in linking of credit with marketing. In other countries like Ceylon, Burma, Indonesia etc. the co-operative movement has been receiving greater fillip.